REMARKS / ARGUMENTS

Claims 1 - 18 remain in the application.

The Examiner rejected claims 1-17 under U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,477,150 to Maggenti et al., and rejected claim 18 under U.S.C. 103(a) as being obvious in view Maggenti et al. in view of U.S. Patent No. 6,618,375 to Rezaiifar et al. Applicant respectfully traverses the rejections for the reasons outlined below.

Claim 1 recites a method for retransmitting packets in a wireless communications network comprising: (a) receiving a retransmission request for a packet having available at least one retransmission rounds and a number of retransmissions; (b) determining, from the available at least one retransmission rounds and the available number of retransmissions, retransmission parameters for the packet; (c) retransmitting the packet at the determined retransmission parameters; and (d) updating the number of retransmissions.

Maggenti et al. discloses a system and method for point-to-multipoint communications In particular, Maggenti et al. discloses a point-to-multipoint method and system that includes a communication manager (CM) that arbitrates between multiple communications devices (CDs) to determine which CD is permitted to communicate with the other CDs at a given instance. The Examiner states that Maggenti et al. teaches that "... CM 218 may periodically retransmit AYT requests to any registered CD which has not acknowledged ***receipt*** of the AYT.", "...The net itself will remain dormant until one or more members trigger the transmission of a PTT request. If CM 218 ***determines*** it can grant the PTT request message (i.e., the PTX message) (including performing any necessary arbitration...", "***retransmits*** a second PTT message using the same PTT message.. ", and "...CD 202 may be preprogrammed with a group-list, which defines at least one net-address in which CD 202 is a member. CD 202 can later send a request to the top-level SIP server to ***update*** its group list " [emphasis added]

With respect, it appears that the Examiner has selected random, and unrelated, passages from the disclosure of Maggenti et al. merely because they include the terms "receipt", "determines", "retransmits" and "update", which terms also appear, in slightly different form, in claim 1 of the present application. Maggenti et al. does not discuss retransmission requests for packets, except as found at col. 22, line 66 - col. 23, line 3, noted by the Examiner in relation to the rejection of claims 2 - 8. This passage discloses that multiple

NAKs can be sent by the RLP, thus prompting retransmission of multiple copies of a lost frame. This is in direct contrast to the invention disclosed and claimed in the present application, where one or more copies of a lost packet are sent in response to a single retransmission request (NAK or ACK-based).

The first selected passage refers to retransmission of an "are-you-there" (AYT) request from the CM to a CD. This is clearly an activation prompt, not a retransmission request, as recited in claim 1. The further AYT request is not sent in response to a retransmission request, but is merely part of initializing the appropriate communication channels with members of a network. Nothing in Maggenti et al. discloses or suggests receiving a retransmission request for a packet having at least one available retransmission round and a number of available retransmissions as described and claimed in the present application.

The second passage selected from Maggenti et al. refers to receipt of a push-to-talk (PTT) request message. A PTT message is not a retransmission request as recited in the claims of the present application. On receipt of the PTT message, the CM determines whether it can grant the request. In other words, the CM arbitrates the request to determine whether the requesting CD can transmit to the other group members. Nothing in Maggenti et al discloses a determination of retransmission parameters for a packet, nor that the retransmission is based on the number of available retransmission rounds and the number of remaining retransmissions for the given packet.

The third passage selected from Maggenti et al. actually refers to retransmitting "a second PTT message using the same message identifier in the third field." [emphasis added, col. 30, lines 47 - 48]. While Applicant acknowledges that the second PTT message is likely a packet, Maggenti et al. does not disclose retransmission of a packet with retransmission parameters determined from the available retransmission rounds and remaining available retransmissions for that packet, as recited in claim 1 of the present application.

The fourth passage refers to updating a group list with a new net address for a particular CD. Applicant submits that this has no relationship to updating the number of retransmissions available to a given packet as recited in claim 1.

Thus, Applicant submits that the method for retransmitting packets as recited in claim 1 is not anticipated by Maggenti et al. As claims 2 - 8 depend, either directly or indirectly, from

claim 1, it is submitted that they too are not anticipated by Maggenti et al. Withdrawal of the rejections to claim 1 - 8 is, therefore, requested.

Claim 9 recites a radio link protocol engine for providing retransmission parameters for a packet in response to an automatic retransmission request, comprising: a buffer for storing retransmission parameters for a packet having a predetermined per packet quality of service; a radio link protocol automatic retransmission request engine for determining the retransmission parameters for the packet as a function of the predetermined per packet quality of service (QoS) and a wireless link quality of service.

The Examiner asserts that Maggenti et al. teaches that ". . a dormant CD 202 may buffer media traffic...", and " ...SIP call-signaling frames exchanged between a cellular-based CD 202 and a base station 216 are encapsulated with the Radio Link Protocol (RLP), a well known wireless protocol for transmitting data over-the-air." Applicant submits that Maggenti et al. does not disclose a buffer for storage of retransmission parameters for a packet, nor does it disclose an RLP automatic retransmission request (ARQ) engine that determines the retransmission parameters based on per packet QoS and wireless link QoS. Applicant does not dispute the prior existence of buffers and RLP, but it is unclear how the above-cited passages relate to the particular implementation of an RLP engine recited in claim 9, or how they render claim 9 anticipated. Therefore, Applicant requests withdrawal of the anticipation rejections to claim 9, and its dependent claims 10 - 13.

Claim 14 recites a wireless access network, comprising: a scheduler for scheduling a packet, having a predetermined per packet quality of service, for transmission over a radio link having a predetermined wireless link quality of service; a radio link protocol engine for providing retransmission parameters for the packet in response to an automatic retransmission request, the radio link protocol engine including a buffer for storing retransmission parameters for the packet; and a radio link protocol automatic retransmission request engine for determining the retransmission parameters for the packet as a function of the predetermined per packet quality of service and the predetermined wireless link quality of service.

The Examiner states that Maggenti et al. discloses that the "choice of CM might instead be determined dynamically, based on proximity to the majority of net participants (determined using available position location techniques), available quality of service on a

service providers inter-system network, and other factors", and that "systems using... Radios" are well known, and ". . have been used .. in order to communicate scheduling information...", and "In the case of CDs 202, 204, and 206, the request is transmitted over-the-air to one or more base stations 216. MSC comprises a well-known Inter-Working Function (IWF) (not shown) for processing data packets, including the request, ..."

The first passage upon which the Examiner relies relates to choice of a CM based on the enumerated factors, including QoS of the service provider's inter-system network. It is unclear to Applicant how this relates to a packet scheduler for scheduling packets based on their *per packet* QoS. Nor is it clear how the second passage cited by the Examiner buttresses the rejection, since it actually reads "...dispatch systems using Land Mobile Radios (LMRs) have been used in trucks, taxis, buses and other vehicles in order to communicate scheduling information between a central dispatch center and one or more corresponding fleet vehicles." [emphasis added, col. 1, lines 16 - 20], and is clearly not related to packet scheduling in a wireless network.

The third passage cited by the Examiner relates to wireless transmission of a push-to-talk (PTT) request by a CD. There is nothing in Maggenti et al. that discloses an RLP engine that provides retransmission parameters for a packet in response to an ARQ, nor is there any disclosure in Maggenti et al. of an RLP engine having a buffer that stores retransmission parameters for the packet, and an RLP ARQ engine that determines the retransmission parameters for the packet as a function of the predetermined per packet QoS and the predetermined wireless link QoS.

Therefore, Applicant submits that claim 14, and its dependent claims 15 - 17, are not anticipated by Maggenti et al., and requests withdrawal of the rejections thereto.

With respect to the rejection of Claim 18 as being obvious in view of Maggenti et al. and Rezaiifar et al., Applicant reiterates the comments above, and further submits that the passages quoted from Rezaiifar et al. merely acknowledge the prior existence of ARQs and RLP, which is acknowledged by Applicant. They do not, however, disclose or suggest a retransmission counter, as recited in claim 18. Withdrawal of the obviousness rejection to claim 18 is, therefore, requested.

Applicant submits that the application is in condition for allowance, and favorable action to that end is respectfully requested.

Respectfully submitted,
ZHANG, H. et al.

Tel.: (613) 787-3519
Fax: (613) 787-3558

BORDEN LADNER GERVAIS LLP
World Exchange Plaza
100 Queen Street, Suite 1100
Ottawa ON K1P 1J9 CANADA

By _____
L. Anne Kinsman
Reg. No. 45,291

ALK/ldg
IP-OTT-1\512136\1